

voltage is still operated within a 10% tolerance window or level with an upper limit bounded by reliability voltage value V_{ccx} , as was the case for Figure 1.

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However, for the present embodiment the secondary supply voltage is operated within a range having an upper limit that is the same as for the principal supply voltage, i.e., V_{ccx} . The principal supply voltage is operated within a range having a lower limit of the .90 multiplied by a first input voltage required value (V_{cc1}), i.e., $.90 \times V_{cc1}$ or one minus the tolerance level 10% multiplied by the first input voltage required value. The secondary supply voltage, V_{cc2} , is operated within a range having a lower limit of .90 multiplied by a second input voltage required value (V_{cc2}), i.e. $.90 \times V_{cc2}$, or one minus the tolerance level (10%) multiplied by the second input voltage required value. For example, if V_{cc2} is 1.4 volts, the lower limit of the range that the secondary supply voltage V_{cc2} is operated within would be 1.26, or $(.9 \times 1.4)$.

Replace paragraph 25 on page 6

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A regulating scheme in accordance with an embodiment of the present invention is further described using an exemplary numerical example in reference to Figure 3. Referring to Figure 3, the second input voltage required value, V_{cc2} , where $V_{cc2} < V_{cc1}$, may be for example, 1.4 V_{DC} , and the first input voltage required value, V_{cc1} , may be, for example, 2.0 V_{DC} . As shown in Fig. 2, for each different input voltage required value, the regulator provided in accordance with an embodiment may maintain each of the distinct input voltages presented to microelectronics device 30 within the same upper limit, V_{ccx} , which is the same upper limit for V_{cc1} . However, the regulator provided in accordance

22 with the embodiment may maintain the lower limit for the second input voltage required value, V_{cc2} ($1.4 V_{DC}$, for example), equal to the lesser of the product of one minus the tolerance level (in this example 10%) multiplied by the first input voltage required value ($2.0 V_{DC}$) and one minus the tolerance level multiplied by the second input voltage required value ($1.4 V_{DC}$). In the exemplary regulating scheme of Figure 3, this determination yields a lower limit of $1.26 V_{DC}$, thus giving the power supply in accordance with an embodiment a dynamic window from the second input voltage required value, of 740 mV instead of the relatively tight range of 140 mV.

Replace paragraph 32 on page 9.

23 Referring now to Figure 7, microelectronics device 30 may be, for example, designed to operate using two input voltage required values, V_{cc1} and V_{cc2} . In this case the regulator circuit 300 provided in accordance with an embodiment may include two conceptually distinct regulator circuits 310 and 315. As shown in Figure 7, regulator circuit 310 may be used to provide power supply regulation for a principal supply voltage to track a first input voltage required value, V_{cc1} , while regulator circuit 315 may be used to provide power supply regulation for a secondary supply voltage to track a second input voltage required value, V_{cc2} , in accordance with an embodiment. In an embodiment, the first input voltage required value, V_{cc1} , may be a higher input voltage of, for example, $2.0 V_{DC}$, while the second input voltage required value, V_{cc2} , may be a lower input voltage of, for example, $1.4 V_{DC}$. In an exemplary embodiment of Figure 7, regulator circuits 310 and 315 are each provided in accordance with